**Project Abstract**

1. **Project Number:** S20-56
2. **Project Title:** RING CV
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4. **Advisor:** Professor Dana
5. **Keywords:** Computer Vision, Facial Recognition, Security, Accessibility
6. **Project abstract:**

The goal of RING CV is to utilize computer vision and facial recognition to help everyone, even those with visual impairments, feel safe and secure in their homes and out in public. Often, those with visual impairments are vulnerable to safety threats in the form of home attacks and burglaries. To prevent this, Ring CV provides security by identifying if the person at the door is a known connection before alerting the homeowner to open the door.

To do this, we will extract the image of the person at the doorstep using a camera at the user’s front door. After using facial recognition to identify the identity of the person at the door, the features of the identified person will be compared to those of the homeowner’s predetermined list of friends. If the person at the door is a match, then the homeowner will get a notification of who it is. However, if the person is not recognized, then the homeowner will get a notification that the identity cannot be identified. Ring CV will also send a notification to the user when he/she has received a package at the front door, using object classification.

As the safety of users is most important, Ring CV also aims to send notifications to officials when it detects an anomaly. Recognizing unusual activities, such as kidnappings, in real time will allow for the police to get notifications right as these events occur and enable them to react faster to prevent further damage from occurring.